

# Package ‘readrba’

December 16, 2020

**Title** Download and Tidy Data from the Reserve Bank of Australia

**Version** 0.1.0

**Description** Download up-to-date data from the Reserve Bank of Australia in a tidy data frame. Package includes functions to download current and historical statistical tables ([\(<https://www.rba.gov.au/statistics/tables/>](https://www.rba.gov.au/statistics/tables/)) and forecasts ([\(<https://www.rba.gov.au/publications/smp/forecasts-archive.html>](https://www.rba.gov.au/publications/smp/forecasts-archive.html)). Data includes a broad range of Australian macroeconomic and financial time series.

**License** MIT + file LICENSE

**Encoding** UTF-8

**LazyData** true

**RoxygenNote** 7.1.1

**URL** <https://mattcowgill.github.io/readrba/index.html>

**BugReports** <https://github.com/MattCowgill/readrba/issues>

**Suggests** covr, testthat, knitr, rmarkdown, ggplot2

**Imports** readxl (>= 1.3.0), tidyr (>= 1.0.0), dplyr (>= 1.0.0), purrr, rlang, xml2, rvest (>= 0.3.6), stringr, httr, lubridate, curl

**Depends** R (>= 3.6.0)

**VignetteBuilder** knitr

**NeedsCompilation** no

**Author** Matt Cowgill [aut, cre] ([\(<https://orcid.org/0000-0003-0422-3300>](https://orcid.org/0000-0003-0422-3300))

**Maintainer** Matt Cowgill <mattcowgill@gmail.com>

**Repository** CRAN

**Date/Publication** 2020-12-16 10:00:02 UTC

## R topics documented:

browse_rba_series . . . . .	2
rba_forecasts . . . . .	3
read_cashrate . . . . .	5
read_rba . . . . .	5
read_rba_local . . . . .	7
tidy_rba . . . . .	8

<b>Index</b>	<b>9</b>
--------------	----------

---

browse_rba_series	<i>Browse available RBA data series</i>
-------------------	---

---

### Description

Use these functions to find the table number or series ID of the data you're interested in.

### Usage

```
browse_rba_series(search_string = "")
```

```
browse_rba_tables(search_string = "", refresh = FALSE)
```

### Arguments

`search_string` Word or phrase to search for, such as "gold" or "commodity" or "labour". If left as "", the function will return all series.

`refresh` logical; FALSE by default. When FALSE, internal data is used. When TRUE, the RBA website is re-scraped to obtain current information about available tables. This can take a few seconds.

### Value

A `data.frame` (`tbl_df`) containing RBA data series/tables that match the `search_string`. Where no `search_string` is supplied, the `data.frame` will contain information about all RBA series/tables.

The `data.frame` returned by `browse_rba_tables()` includes a column called `readable`. This column takes the value TRUE if the table is able to be read by `read_rba()` and FALSE if it cannot be read.

### Examples

```
# Find series that contain 'unemployment'
browse_rba_series("unemployment")

# Or all labour-related series
browse_rba_series("labour")
```

```

# Or those related to commodities
browse_rba_series("commodities")

# Or all series
browse_rba_series()

# Or just look for tables that contain the word 'labour'
browse_rba_tables("labour")

# Or all tables
browse_rba_tables()

# To re-scrape the RBA website to ensure you have up-to-date information
# about available tables:
## Not run:
browse_rba_tables(refresh = TRUE)

## End(Not run)

```

---

rba_forecasts	<i>Compile the RBA's public forecasts of key economic variables over time</i>
---------------	---

---

## Description

Compile the RBA's public forecasts of key economic variables over time

## Usage

```

rba_forecasts(
  refresh = TRUE,
  all_or_latest = c("all", "latest"),
  remove_old = TRUE
)

read_forecasts(...)

```

## Arguments

refresh	logical; default is TRUE. When set to TRUE, the RBA's website will be scraped to obtain recent forecasts. When FALSE, only the package's internal data will be returned, which may be out of date.
all_or_latest	character; default is "all". When "all" is specified, all publicly-available forecasts will be returned; when "latest", only the latest forecasts will be used.
remove_old	logical; default is TRUE. When TRUE, any observations for which the date is more than 180 days prior to the forecast_date is excluded.
...	Arguments passed to rba_forecasts()

## Details

Forecasts are not available for all series on all forecast dates. CPI inflation and GDP growth are included in all forecasts. The unemployment rate is included in most forecasts. Other series are included inconsistently, based on their availability in the underlying source data.

All forecasts issued on or before November 2014 come from Tulip and Wallace (2012), RBA RDP2012-07. Data available: <https://www.rba.gov.au/statistics/historical-forecasts.html>.

Data from 2015 to present are scraped from the RBA's quarterly Statement on Monetary Policy (<https://www.rba.gov.au/publications/smp/2020/aug/>). Note from Feb 2015 to August 2018 (inclusive) only include a few series; those from November 2018 onwards include more series.

`read_forecasts()` is a wrapper around `rba_forecasts()`.

## Value

A tidy `tbl_df` containing 8 columns:

- `forecast_date` The (approximate) date on which the forecast was published. Note that this is the first day of the publication month, so the `forecast_date` for forecasts in the February 2020 Statement on Monetary Policy is as `.Date("2020-02-01")`.
- `date` The date to which the forecast pertains. Note that this is the first day of the final month of the relevant quarter. For example, a forecast of GDP in the June quarter 2021 will be as `.Date("2021-06-01")`.
- `year_qtr` The year and quarter to which the forecast pertains, such as 2019.1.
- `series` Short, snake\_case description of the data series being forecast, such as `gdp_change` or `unemp_rate`. These are consistent over time.
- `value` The forecast value, in per cent. For example, if GDP growth is forecast to be 3 per cent, the value will be 3. Note that where a forecast is given as a range (eg. 3.5-4.5%) the value will be the midpoint of the range (eg. 4%).
- `series_desc` Full description of the series being forecast, as per the RBA website, such as "Real household disposable income". Note that series descriptions are not necessarily consistent over time; the values here are those published by the RBA. The `series` column is consistent over time.
- `source` For recent forecasts, this is 'SMP', meaning the RBA's Statement on Monetary Policy. Forecasts prior to 2014 are sourced from various places; see `Details`.
- `notes` Notes accompanying the forecasts, as per the RBA's website. Note these are identical for item in a given `forecast_date`.

---

read_cashrate	<i>Convenience function to get the RBA's cash rate.</i>
---------------	---

---

**Description**

Convenience function to get the RBA's cash rate.

**Usage**

```
read_cashrate(type = c("target", "interbank", "both"))
```

```
rba_cashrate(...)
```

**Arguments**

type	One of 'target' (the default), 'interbank', or 'both'. <ul style="list-style-type: none"> <li>• 'target' The RBA's cash rate target.</li> <li>• 'interbank' The interbank overnight cash rate.</li> <li>• 'both' Both the cash rate target and interbank overnight cash rate.</li> </ul> 'target' fetches the RBA cash rate target. 'interbank'
...	arguments passed to read_cashrate()

**Details**

Note that in the very early 1990s, the cash rate target was expressed as a range (eg. "17% to 17.5%"). Where this is the case, the value returned here (and in read\_rba()) is the mid-point of this range.

If type = 'both', note that the returned tbl is tidy/long.

rba\_cashrate() is a wrapper around read\_cashrate().

**Value**

A tbl\_df with two columns: date and cash\_rate.

---

read_rba	<i>Download, import, and tidy statistical tables from the RBA</i>
----------	---

---

**Description**

Download, import, and tidy statistical tables from the RBA

**Usage**

```
read_rba(
  table_no = NULL,
  cur_hist = "current",
  series_id = NULL,
  path = tempdir()
)

read_rba_seriesid(series_id, path = tempdir())
```

**Arguments**

table_no	Character vector of table number(s), such as "A1" or c("a1.1", "g1").
cur_hist	Character; valid values are "current" or "historical". Must be either a vector of either length 1 (eg. "cur_hist = "current") or the same length as table_no (eg. cur_hist = c("current", "historical")). cur_hist is ignored if series_id is specified.
series_id	Optional, character. Specifying series_id is an alternative to specifying table_no. Supply unique RBA time series identifier(s). For example, "GCPIAG" is the identifier for the CPI, so series_id = "GCPIAG" will return this series. You can supply multiple series IDs as a character vector, such as series_id = c("GCPIAG", "GCPIAGSAQP"). Note that cur_hist is ignored if you specify series_id - both current and historical data will be included in the output.
path	Directory in which to save downloaded RBA Excel file(s). Default is tempdir().

**Details**

read\_rba() downloads, imports and tidies data from statistical tables published by the Reserve Bank of Australia. You can specify the requested data using the table\_no or series\_id.

To find the table\_no or series\_id that corresponds to the data you want, use the functions browse\_rba\_tables() and/or browse\_rba\_series(). Note that some historical exchange rate tables do not have table numbers on the RBA website; they have been assigned table numbers - see browse\_rba\_tables("exchange rates").

To see which tables cannot currently be read, run browse\_rba\_tables(FALSE).

read\_rba\_seriesid() is a wrapper around read\_rba().

**Value**

A single tidy tibble containing the requested table(s)

**Examples**

```
## Not run:
# Get a single table:
read_rba(table_no = "a1.1")

# Get multiple tables, combined in a tidy tibble:
```

```
read_rba(table_no = c("a1.1", "g1"))

# Get both the current and historical versions of a table
read_rba(table_no = c("a1.1", "a1.1"), cur_hist = c("current", "historical"))

# Get data based on the series ID:
read_rba(series_id = "GCPIAG")

# Or, equivalently, use:
read_rba_seriesid("GCPIAG")

# Get multiple series IDs:
read_rba(series_id = c("GCPIAG", "GCPIAGSAQP"))

## End(Not run)
```

---

read_rba_local	<i>Load and tidy local RBA Excel sheets</i>
----------------	---

---

## Description

Load and tidy local RBA Excel sheets

## Usage

```
read_rba_local(filenamees, series_id = NULL)
```

## Arguments

filenamees	Vector of filename(s) (with path) pointing to local RBA Excel sheets
series_id	Optional series ID

## Value

A tbl\_df containing tidied RBA Excel sheet(s)

## Examples

```
## Not run:
read_rba_local("data/rba_file.xls")

## End(Not run)
```

---

`tidy_rba`*Tidy a statistical table from the RBA*

---

**Description**

Tidy a statistical table from the RBA

**Usage**

```
tidy_rba(excel_sheet, series_id = NULL)
```

**Arguments**

<code>excel_sheet</code>	Dataframe of RBA spreadsheet.
<code>series_id</code>	Optional series ID

**Value**

Tidy tibble



# Index

`browse_rba_series`, [2](#)  
`browse_rba_tables` (`browse_rba_series`), [2](#)  
  
`rba_cashrate` (`read_cashrate`), [5](#)  
`rba_forecasts`, [3](#)  
`read_cashrate`, [5](#)  
`read_forecasts` (`rba_forecasts`), [3](#)  
`read_rba`, [5](#)  
`read_rba_local`, [7](#)  
`read_rba_seriesid` (`read_rba`), [5](#)  
  
`tidy_rba`, [8](#)